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New Hungarian mayfly (Ephemeroptera) species arising from collectings of larvae II.

by
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Abstract: This paper deals with two new mayfly species for Hungary: *Baetis tricolor*, *Brachycercus europaeus*. The localities of the collected specimens are indicated on a UTM map.
Keywords: Hungary, Ephemeroptera larva, faunistics, distribution, communities, habitats

Introduction

Since we have published the first part of this paper the Hungarian Ephemeroptera fauna has been further enriched with two new species [*Oligoneuriella keffermuellerae*, *O. polonica* – Kovács *et al.* (1999)] as a result of the collecting of Ephemeroptera larvae. Between 8th April 1994 – 28th November 1998 on 407 sampling points 557 collectings were carried out. During these samplings two new species were found: *Baetis tricolor* and *Brachycercus europaeus*. The information regarding the study area, collecting methods and the structure of the published data is the same as in Kovács *et al.* (1998). The collected material is preserved in 70% ethanol and is deposited in the Mátra Museum (Gyöngyös).

Results

Family Baetidae

Baetis tricolor Tshernova, 1928

Gyula: Road to Sarkad, Fekete-Körös, ES27, 28.05.1997, 1, P. Juhász, B. Kiss, P. Olajos — Kiszombor: Route No. 43, Maros, DS51, 01.09.1997, 1, P. Juhász, B. Kiss, T. Kovács, P. Olajos — Molnaszecsőd: Road to Döröske, Rába, XN21, 18.08.1998, 7, A. Ambrus, T. Kovács — Nagylak: Maros, DS71, 01.09.1997, 1, P. Juhász, B. Kiss, T. Kovács, P. Olajos — Rábahídvég: Route No. 8, Rába, XN31, 18.08.1998, 2, A. Ambrus, T. Kovács — Szatmárcseke: Túrbukó, Tisza, FU22, 27.09.1995, 1, K. Bánkuti, P. Juhász, T. Kovács — Tarpa: 710 river km, Tisza, FU12, 06.06.1996, 4, T. Kovács — Tiszabecs: Mázsáló, Tisza, FU33, 28.09.1995, 1, K. Bánkuti, T. Kovács; Szabó-füzes, Border stone No. 109, Tisza, FU33, 03.08.1995, 2, P. Juhász, T. Kovács — Tiszabercel: ferry, left side, Tisza, EU43, 18.07.1996, 1, K. Bánkuti, T. Kovács, A. Varga — Vésztő: Road to Újiráz, Sebes-Körös, ET20, 02.09.1997, 7, P. Juhász, B. Kiss, T. Kovács, P. Olajos.

This species has a Transpalaearctic distribution (Kluge 1997). It was found in different habitats of the rivers, usually from the slowly flowing edge of the water, it was collected from stones, from the sediment and from among the submerged aquatic plants. Most often the following species were found at the same sampling points: *Heptagenia flava*, *Caenis*

pseudorivulorum (on 6 occasions); *Raptobaetopus tenellus*, *Heptagenia sulphurea*, *Ephemerella ignita* (on 5 occasions); *Baetis fuscatus*, *Heptagenia coerulans*, *Heptagenia longicauda*, *Ephemera lineata* (on 4 occasions).

Family Caenidae

Brachycercus europaeus Kluge, 1991 (syn. *B. pallidus* auct.)

Körmend: Route No. 86, Rába, XN20, 18.08.1998, 5, A. Ambrus, T. Kovács — Molnaszecsőd: Road to Döröske, Rába, XN21, 18.08.1998, 4, A. Ambrus, T. Kovács — Rábahídvég: Route No. 8, Rába, XN31, 18.08.1998, 3, A. Ambrus, T. Kovács — Rum: Route No. 87, Rába, XN42, 18.08.1998, 2, A. Ambrus, T. Kovács.

This species is widespread in Poland (Sowa 1975), Lithuania and Russia to the Ural Mountains (Kluge 1991). The specimens were collected on the slowly flowing sections of River Rába, near the shore, on muddy, sandy, sediment covered bottom. Most often the following species were found at the same sampling points: *Isonychia ignota*, *Heptagenia coerulans* (on 4 occasions); *Heptagenia flava*, *Oligoneuriella keffermuellerae*, *Oligoneuriella pallida*, *Ephemerella ignita*, *Cercobrachys minutus* (on 3 occasions).

Discussion

Due to its geographical distribution the occurrence of *Baetis tricolor* was expected in Hungary. This species was recorded in 10 UTM quadrats altogether at 11 localities from the following rivers: Fekete-Körös, Maros, Rába, Tisza, Sebes-Körös.

Brachycercus europaeus was not found formerly within the Carpathian Basin. During our collecting trips this species was found at 4 sampling points in four different UTM quadrats on the Rába section between Körmend and Rum. At present this is the most south-western border of its area. Several species that are rare at European level were found at the same sampling points: *Isonychia ignota*, *Heptagenia coerulans, Oligoneuriella keffermuellerae*, *Cercobrachys minutus.*

The occurrence of the latter species together with the closely related *Brachycercus europeus* at the same sampling points was discussed by Kluge (1991) (Russia: Baskiria, River Belaja). The two species were recovered in Hungary in identical habitats.

The results of collecting activities of aquatic larvae carried out during the past years (Kovács *et al.* 1998, 1999) and the data presented here indicate and emphasise the importance of Tisza river and Rába, as in both of these water bodies 9 new Ephemeroptera species for Hungary were found.

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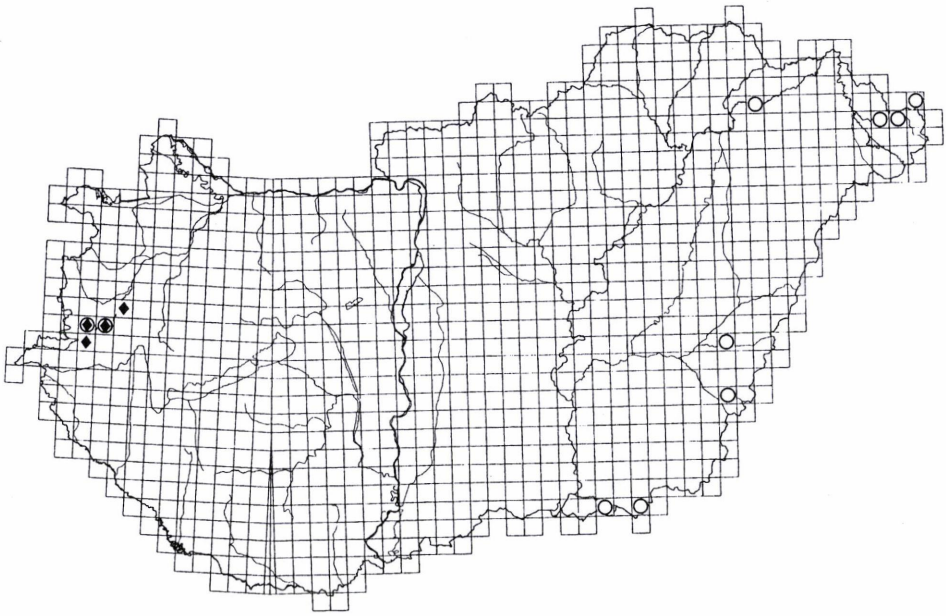

Fig. 1. The Hungarian localities where *Baetis tricolor* ○ and *Brachycercus europaeus* ◆ were collected

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